

set 6.15 p.m. No attempt was made to co-ordinate the duration of calls with the type of weather prevailing. It is hoped to make this the subject of a future study.

I am not aware if such studies have been made on Indian birds before. No such information is available from the literature in my possession. I shall be much obliged if any reader will put me in touch with earlier observations of this nature.

The total output of song in a day of approximately 12 hours and 25 minutes for each of the species under observation was as follows:—

1. Magpie Robin (male)—53.6 minutes.
2. Crimson-breasted Barbet—58.5 minutes.
3. Yellow-cheeked Tit—28.7 minutes.
4. Brain-fever Bird (Papiha)—21.8 minutes.
5. Koel (male)—24.5 minutes.

SUMMARY

During April and May, 1950, observations were made on the duration in minutes of songs of 5 different birds at hourly intervals. The results show that peaks occur in the morning and evening with a period of comparative silence in the middle of the day.

JAMAL ARA

20. ANGLING FOR CROCODILES WITH HOOK AND LINE IN KRISHNARAJASAGAR RESERVOIR

It is common practice to angle for fish; but to angle for and land alive a crocodile is novel and very exciting.

The author started with the idea of devising a method to catch crocodiles on hooks. No data was available except local stories of live dogs and cats being used as baits with country-made hooks tied around their necks and left tethered on the river bank in likely spots.

The method of catching fish on night-lines with bait could be suitably modified for the purpose in question by using bait other than live cats or dogs.

Hook.—The largest size of Norwegian fish-hooks i.e. No. 1 size 3 in. long by $\frac{1}{8}$ in. thick were procured. As double hooks are not available, two such hooks were jointed shank to shank so as to have the prongs facing out.

Line.—Strong coir rope, 100 ft. long, $\frac{1}{2}$ in. in diameter and hand-twisted was used.

Bait.—At first chunks of butchers' meat were used. But with the heavy hooks and stout ropes the whole bait sank to the bottom and no results were achieved over half a dozen trials. Since while lining for fish the baits whether alive or otherwise would float on water, it was thought better to give a floating bait to the crocodile. An empty sealed tin was used as buoy, but 3 or 4 trials resulted in failure.

Now it was decided to change the bait; as such, sheeps' lungs was chosen this time to replace meat. Sheeps' lungs besides being cheap are capable by themselves of remaining afloat even with the heavy hook imbedded inside.

On the first attempt when the baited hook was left overnight and

examined the next morning, the rope (minus bait and hook) was found floating in the water, the cut-end of the rope clearly showing that it had been chewed up between the jaws of a crocodile. This kindled hopes of eventual success. To prevent the hook being torn away a one yard length of the line between hook and coir rope was made up of about a dozen thin but highly twisted cotton rope-strands loosely put together. As each strand was only $\frac{1}{4}$ in. in diameter, it was expected that the strands would slip between the 'V' shaped teeth of the crocodile and thus escape being bitten through.

Attempts were renewed and quickly met with success as narrated below.

9-4-50.—At 7 p.m. the baited hook was taken out and left floating about 20 ft. from shore where the water depth was about 10 ft. The other end of the rope was strongly secured to a steel crow-bar driven deep into the ground.

10-4-50.—At 6 a.m. it was noticed that the bait was no longer floating. A slight exploratory pull on the rope resulted in violent disturbance in the water and the crocodile made himself visible by lashing out his tail. When it was made certain that the reptile was properly hooked, the problem was to secure him alive. The alternative was to get him shot.

A second rope was procured and placed in a loose-hitch on the first rope. By having two men pull on this rope, the crocodile was, with great difficulty slowly hauled ashore and held between the two ropes.

A running noose was, with great difficulty, placed over the snapping jaws; and another secured the lashing tail. The crocodile was now hitched up between two stout and long bamboos. It took 8 men to carry him over to the dam-side where he was left in a shallow fountain sufficiently well secured. It measured 10 ft. 9 in. The hook was deeply imbedded and could not be safely dislodged.

11-4-50.—The next morning the crocodile was found dead, obviously due to hook-injuries as the hauling-in caused the hooks to tear deep in the guts. This was later confirmed.

Post-Mortem.—The hook was found deep in the guts in the stomach-region and large tears in the abdominal wall were found.

Examination of the guts disclosed some remarkable contents. (1) over a dozen pieces of bone 3-4 in. long and 1-1 $\frac{1}{2}$ in. in diameter. The bones were broken up, hence it was not possible to make out whether they were human or animal in origin. (2) about a dozen pebbles $\frac{1}{2}$ -1 in. in size and worn smooth. (3) human-body remains:—a human left hand cut off at the wrist and a human left foot cut at the ankle. These were fairly fresh except that the colour was very pale. Finger and toe-nails were nearly intact. Loosely hanging nerves and muscles indicated that swallowing had been fairly recent.

Conclusion.—The above method having met with success deserves to be tried out regularly and further developed. The elimination of these dangerous reptiles is very necessary for the safety of the villagers and their cattle not to speak of the thousands of fish that must be destroyed by the large number of reptiles that inhabit the reservoir.

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